

Claims

1. A method for the purification, stabilization
or/and isolation of nucleic acids from biological
materials, in which an extraction buffer and an
adsorption matrix for binding contaminations are
added to the nucleic acid-containing sample and
the nucleic acids are subsequently removed from
the adsorption matrix,
characterized in that
the extraction buffer contains
 - (a) a pH in the range from 2-8,
 - (b) a salt concentration of at least 100 mM
or/and
 - (c) a phenol-neutralizing substance.
2. The method as claimed in claim 1,
characterized in that
an extraction buffer of pH 4-6.5 is used.
3. The method as claimed in claim 1 or 2,
characterized in that
an extraction buffer with KCl or/and NaCl at a
concentration of at least 100 mM is used.
4. The method as claimed in any of the preceding
claims,
characterized in that
an extraction buffer with at least 0.5%
polyvinylpyrrolidone as phenol-neutralizing
substance is used.
5. The method as claimed in any of the preceding
claims,
characterized in that
an insoluble carbohydrate-based adsorption matrix
is used.

6. The method as claimed in any of the preceding claims,
characterized in that
potato flour or components thereof, where
5 appropriate mixed with other carbohydrates, is used.
7. The method as claimed in any of the preceding claims,
10 **characterized in that**
the nucleic acid-containing sample is taken from feces.
8. The method as claimed in any of the preceding claims,
15 **characterized in that**
the sample is incubated in the extraction buffer prior to contacting with the adsorption matrix.
- 20 9. The method as claimed in claim 8,
characterized in that
the incubation temperature is $\leq 10^{\circ}\text{C}$.
- 25 10. The method as claimed in claim 8,
characterized in that
the incubation is carried out under conditions which are beneficial to a release of the nucleic acids.
- 30 11. The method as claimed in claim 10,
characterized in that
the incubation temperature is $\geq 50^{\circ}\text{C}$.
- 35 12. The method as claimed in any of the preceding claims,
characterized in that
the sample is directed over the adsorption matrix by centrifugation, by applying reduced pressure or/and by means of gravity.

13. The use of a method as claimed in any of claims 1 to 12 for the analysis, detection or isolation or nucleic acids from stool samples.
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14. A reagent kit for purification, stabilization or/and isolation of nucleic acids from biological materials comprising:
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- (a) an extraction buffer as defined in any of claims 1 to 4, which is suitable for taking up a nucleic acid-containing sample, and
 - (b) an adsorption matrix for binding contaminations of the biological materials.

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